

### **ABSTRACT**

A biomaterial useful for bioprostheses such as bioprosthetic heart valves is provided in which the fixed tissue has improved elastic properties. The high elastin-containing biomaterial is further characterized by having anisotropic properties wherein the biological material has a greater stiffness in one direction and a greater elasticity in a cross direction. For instance, the biological material has an elastin content of about 30% by weight. In one embodiment, the biological material is vena cava tissue.